(c) Yes, Sir. Against the capacity addition to the tune of 21,180 MW during X Plan, XI Plan envisages capacity addition of 78,577 MW which is about four times what was achieved during the Tenth Five Year Plan.

(d) and (e) To avoid slippages from the proposed XI Plan capacity addition programme, all the stakeholders have been sensitized to complete the ordering of all the XI Plan projects by the end of first year of the XI Plan. As on 26.11.2007 capacity of 4890 MW has already been commissioned and capacity of over 51,600 MW is under execution. Furthermore, additional projects aggregating 4434 MW are also under construction and are expected to be commissioned during the XI Plan. Monitoring mechanism has been strengthened. Central Electricity Authority has a nodal officer associated with each of the on going projects. In addition, periodical reviews are being held in Ministry of Power from time to time.

**Increase in energy demand**

1418. SHRI RAMDAS AGARWAL:
SHRI DARA SINGH:

Will the Minister of POWER be pleased to state:

(a) whether the Paris-based agency in its World Energy Outlook 2007 has reportedly said that India and China would account for around 45 per cent of the increase in global primary energy demand by 2030, when the world's energy needs are expected to be well over 50 per cent higher than they are today; and

(b) if so, what steps Government proposes to take to curb our demand, green house gas emissions and shift in investment in favour of cleaner, more efficient and more secure energy technologies?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) Yes, Sir. World Energy Outlook in its 2007 edition has stated that China and India together account for 45% of the increase in global primary energy demand, and the energy use by both these countries is set to more than double between 2005 and 2030. The report further adds that the momentum of economic development looks set to keep energy demand growing strongly in these two countries. Furthermore, the report states that these developments are contributing to a big improvement in their quality of life, a legitimate aspiration that needs to be accommodated and supported by the rest of the world.

(b) While recognizing that enhancing energy supply and access is a key component of energy strategy of the country, efforts are also a foot to promote Demand Side Management and efficient means of power generation. Another publication of International Energy Agency, 'Key World Energy Statistics'-2007, has estimated that per capita carbon di-oxide emission in India at 1.05 ton is amongst the lowest in the world. In comparison, per capita carbon emission by USA has been 19.61 tons and that of China has been 3.88 tons. Similarly, energy intensity expressed in terms of ratio of total primary energy supply to Gross Domestic Product (calculated on the basis of purchasing power parity in US$ terms) has been comparable to standards achieved by the developed countries. Nevertheless, inter-alia following steps have been taken for development of clean and efficient energy sources:

- Enactment of Energy Conservation Act, 2001 and establishment of the Bureau of the Energy Efficiency.

- Energy efficiency/Energy conservation related measures have been taken up in a big way. Energy labeling programme for major energy consuming equipment has been launched as a consumer guide and encouragement to energy efficient equipment manufacturers. An Energy Conservation Building Code has also been launched recently in May, 2007 to promote energy efficient designs and architecture of new buildings. These would lead to effective Demand Side Management.
- Promotion of Supercritical units for thermal generation. These are a prerequisites for Ultra Mega Power Plants.
- The Electricity Act, 2003 requires that distribution companies must buy part of their electricity purchase from renewable sources.
- As on 31.10.2007, out of 1,36,902 MW installed capacity in the country, 10,175 MW (7.4%) is contributed by renewable.
- In addition, highest priority has been accorded to development of hydro potential in the country and as on 31.10.2007 hydro capacity was 34,390 MW (25%). Hydro Power Initiative of 50,000 MW was launched in 2003 by the Ministry of Power to accelerate hydro power development.
- India has taken a major lead in participating in the Clean Development Mechanism (CDM) programme.
- India is an active member of the Carbon Sequestration Leadership Forum.
- India is a partner in the future Gen Project of the United States to develop an emission free coal fired power plan.

**T&D losses**

1419. SHRI TAPAN KUMAR SEN:
SHRI PRASANTA CHATTERJEE:

Will the Minister of POWER be pleased to state:

(a) the national average Transmission and Distribution (T&D) losses during last three years;

(b) the targeted national average for T&D losses;

(c) the time-frame set for achieving the same;

(d) the amount of power loss in mega watts due to higher T&D losses; and

(e) whether future power demand projection is based on present T&D losses or the targeted one?

THE MINISTER OF POWER (SHRI SUSHILKUMAR SHINDE): (a) In the earlier system of monitoring, utilities used a monitor Transmission and Distribution (T&D) losses. In that system, there was a tendency of utilities booking subsidized/un-metered supply under distribution losses. T&D losses were being computed taking into account electricity bills issued to consumers as accrued income and not on actual collection basis. T&D losses for the country for 2003-04, 2004-05 and 2005-06 were 32.53%, 31.25% and 30.42% respectively. Concept of Aggregate Technical and Commercial (AT&C) losses was introduced in